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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,604	03/15/2001	Peter H. Markusch	Mo5944/MD-00-108-PU	4995
157	7590	05/04/2004	EXAMINER	
BAYER POLYMERS LLC 100 BAYER ROAD PITTSBURGH, PA 15205			SALVATORE, LYNDIA	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/809,604		MARKUSCH ET AL.	
	Examiner		Art Unit	
	Lynda M Salvatore		1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on After Final Response 04/14/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-14 and 19-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's After Final response filed 04/14/04 has been carefully considered and entered. Applicant asserts that the references relied upon by the Examiner do not teach the limitations set forth claim 2 and patent 6,187,982 is not combinable to form the obvious type rejection set forth in section 6 of the Final Office Action. In response, the Examiner agrees with Applicant's arguments and as such withdraws the Final rejection. Specifically, Applicant's arguments are found persuasive to overcome the anticipation and obviousness rejections set forth in sections 2-9 of the Final Office Action. However, upon further consideration a new ground of rejection is set forth herein below.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 2,5-11 and 21 are rejected under 35 U.S.C. 102(e) as anticipated Markusch et al., US 6,187,892.

Applicant previously amended claims 2 and 21 to recite the isocyanate formula of $(Q(NCO)_n)$ where n represents a number from 2 to about 5, Q represents an aliphatic hydrocarbon group, a cycloaliphatic hydrocarbon group, an araliphatic hydrocarbon group, or an aromatic hydrocarbon group. Markusch et al., teaches that R, which is the same as Applicant's "Q" represents a divalent aliphatic hydrocarbon group having 4-18 carbon atoms, a divalent cycloaliphatic hydrocarbon group having 5-15 carbon atoms, a divalent araliphatic hydrocarbon group having 7-15 carbon atoms or a divalent aromatic hydrocarbon group having

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6-15 carbon atoms (Column 3, 55-Column 4, 5). Markusch et al., teaches using poly(phenylisocyanate) (Column 4, 22). In addition Markusch et al., teaches an isocyanate group content from 20-30% by weight, which meets the limitation of at least 10% by weight (Column 3, 35-45). With regard to claim 10, Markusch et al., teaches a NCO content ranging from 5-30% and mixture viscosity of 1000mPa.s at 2525 ° C (Column 2, 58-61 and Column 4, 30-41). Markusch et al., teaches employing a high molecular weight polyether polyol having a functionality ranging from 1.5 to 3 and a molecular weight ranging from 1800 to 12,000 (Column 5, 40-Column 6, 29). With regard to claim 7, Markusch et al., teaches polyether polyols based on propylene oxide (Column 6, 22-25). Markusch et al., also teaches including a low molecular weight diol or triol having a molecular weight ranging from 60-400 (Column 6, 37-52). With regard to the organometallic catalyst, Markusch et al., teaches a variety of suitable materials (Column 9, 15-Column 10,5). With regard to the water limitation, the Examiner interprets the limitation of no more than .1% to include 0%. Markusch et al., teaches applying the polyurethane composition to various substrates such as woven and non-woven textiles (Column 10, 20-25).

The recited intended use of a geotextile in the preamble is not given patentable weight at this time since the prior art meets the structural and chemical limitations. The reference teaches applying the polyurethane composition as uniform layer to a variety of textile substrates. As such, since the Applicant fails to set forth the structure limitations of the geotextile it is the position of the Examiner that a non-woven comprising said polyurethane coating could function in the desired capacity of a geotextile. The burden is upon the Applicant to evidence the contrary.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 12-14, 19-22 and 25-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Markusch et al., US 6,187,892.

As previously set forth Markusch et al., teaches the polyurethane composition.

With regard to claims 12-14 and 29-31, Markusch et al., teaches applying the polyurethane composition to various substrates such as woven and non-woven textiles (Column 10, 20-25), but fails to teach the amount per square meter or thickness limitations, however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the amount of polyurethane coating as a function of desired impregnation and intended final use. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233

With regard to the claimed amount of propylene oxide adduct recited in claims 19b) and 32b), part i, Markusch et al., fails to explicitly the claimed range of 5 to 15 parts, however it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the amount of amine containing propylene oxide adduct to achieve a balance of properties within the mixture. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233

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With regard to the molecular weight limitations set forth in claims 20 and 32, Markusch et al., fails to explicitly teach the claimed ranges, however it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the molecular weight of each component as a function of desired functionality (i.e., viscosity, weight) and intended end use. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617, 617 F 2d 272,205 USPQ 215

With regard to the amount of tin catalyst used as set forth in claim 19 Markusch et al., does teach a tin comprising catalyst (Column 9, 15-20), but fails to explicitly teach the claimed ranges, however it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize amount of catalyst used to facilitate the reaction. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617, 617 F 2d 272,205 USPQ 215

The recited intended use of a geotextile in the preamble is not given patentable weight at this time since the prior art meets the structural and chemical limitations. The reference teaches applying the polyurethane composition as uniform layer to a variety of textile substrates. As such, since the Applicant fails to set forth the structure limitations of the geotextile it is the position of the Examiner that a non-woven comprising said polyurethane coating could function in the desired capacity of a geotextile. The burden is upon the Applicant to evidence the contrary.

Claim Rejections - 35 USC § 102/103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 3,4,23, and 24 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Markusch et al., US 6,187,892 as applied to claims 2 and 19 above.

With regard to the NCO:OH equivalent ratio limitations set forth, although Markusch et al., does not explicitly teach the claimed ratios, it is reasonable to presume that said property is inherent to the invention of Markusch et al. Support for said presumption is found in the use of like materials (i.e., poly(phenylisocyanate), high molecular weight polyols and low molecular weight triols having the desired reactive OH groups), which would result in the claimed property. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594

In addition, the presently claimed NCO:OH equivalent ratio's would obviously been present once the Markusch et al., product is provided. *In re Best*, 195 USPQ 433

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M Salvatore whose telephone number is 571-272-1482. The examiner can normally be reached on M-F.

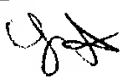
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1482. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

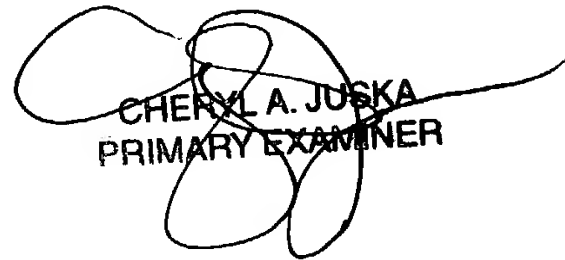
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1482. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 29, 2004

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CHERYL A. JUSKA
PRIMARY EXAMINER